June 19, 1951 C. W. PAULSEN 2,557,461

TAP FOR DRUMS

Filed July 1, 1948

Fig. 1

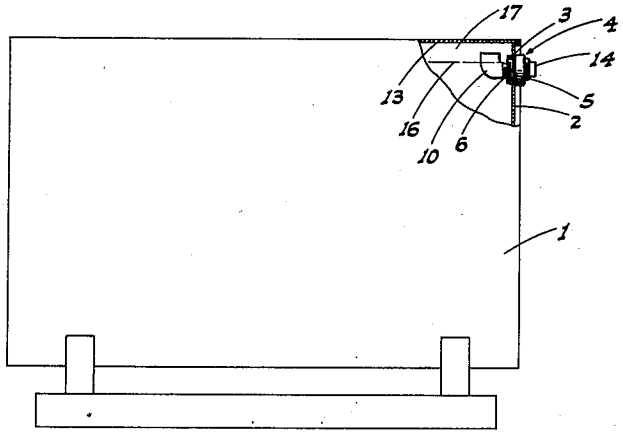


Fig. 2

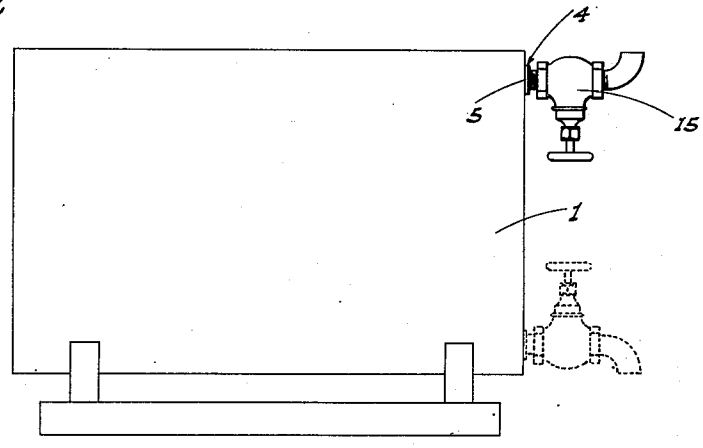
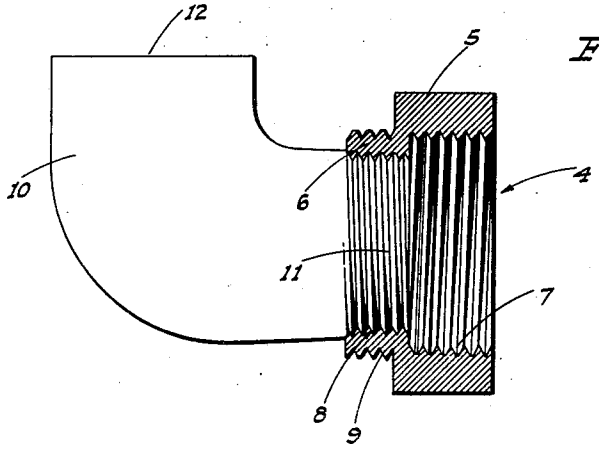


Fig. 3



INVENTOR

C. W. Paulsen

BY Webster & Webster

ATTORNEYS

Patented June 19, 1951

2,557,461

UNITED STATES PATENT OFFICE

2,557,461

TAP FOR DRUMS

Clarence W. Paulsen, Taft, Calif.

Application July 1, 1948, Serial No. 36,489

2 Claims. (Cl. 217—113)

1

This invention is directed to, and it is an object to provide, a novel tap for oil drums or the like; the purpose of the tap being to facilitate the attachment of a spigot valve to a drum preparatory to drawing off the liquid contents thereof.

Another object of the invention is to provide a tap for drums, which is designed so that the screw plug on a drum can be removed and the spigot valve substituted without turning the drum on end, with attendant manual strain, as is now necessary to prevent spillage of the liquid contents during the valve attaching operation.

A further object of the invention is to provide a tap for drums, which prevents flow of liquid contents from the drum, upon removal of the screw plug, even though the drum be resting on its side; this being accomplished by the use, in the usual tapped outlet orifice, of a novel fitting, which functions as above, when the drum is rolled on its side to a position with the outlet orifice at the top of the drum end. The screw plug can then be removed and the spigot valve substituted without spillage or leakage of the drum contents.

An additional object of the invention is to produce a tap for drums, which is simple in structure, and economical to manufacture.

A further object of the invention is to provide a practical and convenient tap for drums, and one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a diagrammatic side elevation of the drum including the novel fitting; the drum being in position for removal of the screw plug, but with the latter still in place in the fitting.

Fig. 2 is a similar view but shows the valve as substituted for the screw plug; the valve being shown in full lines in its position when initially attached to the drum, and shown in dotted lines in its position of use after a half turn of said drum.

Fig. 3 is an enlarged elevation, partly in section, of the fitting, detached.

Referring now more particularly to the characters of reference on the drawings, the numeral 1 indicates an oil drum or the like, which drum includes an end 2 having a tapped outlet orifice 3 adjacent the edge thereof.

In conventional practice a screw plug is threaded into the tapped orifice 3 after filling of the drum 1. Thereafter, at its destination, and when it is desired to attach a spigot valve to the drum, it has been necessary to up-end the drum so that the drum end 2 is uppermost. This is the only way in which the screw plug could be removed, for substitution of the valve, without spillage of the drum contents. Not only was it inconvenient to up-end the drum, but it caused great manual strain, for the reason that a filled oil drum often approximates four hundred pounds in weight.

2

The present invention makes it possible to accomplish the substitution of the spigot valve for the screw plug while the drum remains on its side; the invention being embodied in a novel fitting, indicated generally at 4.

The fitting 4 comprises an annular body 5 having a reduced-diameter, tubular neck 6 projecting axially inwardly therefrom.

The annular body 5 is tapped, as at 7, and the tubular neck 6 is tapped, as at 8.

Additionally, the tubular neck 6 is threaded, as at 9; this threading matching the tapped outlet orifice 3.

A street L, indicated at 10, is screwed, at its threaded end 11, into the tapped portion 8 of the tubular neck 6; the opposite end of said street L remaining open, as at 12.

The above described fitting 4 is mounted on the drum 4 by screwing the externally threaded portion 9 of the tubular neck 6 into the tapped outlet orifice 3 of said drum. When the fitting 4 is brought up tight, the street L 10 is disposed so that its open end 12 faces, and is relatively closed to, the adjacent side 13 of the drum, as clearly shown in Fig. 1.

Thereafter, when the drum 1 is filled, a conventional screw plug 14 is run into the tapped portion 7 of the annular body 5 to prevent loss of contents from the drum during transport thereof.

At its destination, and when it is desired to substitute a hand valve or spigot 15 for the screw plug 14, the drum 1 is first rolled on its side until the fitting 4 is uppermost, or at the top of the drum end 2. In this position the drum may be blocked or cradled if desired.

With the fitting 4 at the top of the drum end 2, the open end 12 of the street L 10 is above the surface 16 of the liquid contents of the drum 1; there being an air pocket 17 above said surface with which said open end 12 of the street L communicates. This air pocket 17 results for the reason that in filling drums, a certain amount

of air is permitted to remain therein to permit of expansion of the contents.

With the open end 12 of the street L 10 in communication with the air pocket 17, the screw plug 14 can be removed and the hand valve or spigot 15 substituted without any spillage or leakage of the drum contents.

After the threaded intake end of the valve 15 has been screwed into the fitting, the drum is rolled a half turn to place said valve in the position of use shown in dotted lines in Fig. 2.

The described fitting thus provides a very convenient and ready device for facilitating the attachment of a spigot valve to an oil drum or the like, while the drum remains on its side; yet preventing spillage or leakage while the valve is being substituted for the screw plug. As will be seen from Fig. 3, the size of the tapped threading 7 is the same as that of threads 9, so that the screw plug originally used can be retained for service in the new fitting.

From the foregoing description it will be readily seen that there has been produced such a device as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, what is claimed as new and useful, and upon which Letters Patent are desired, is:

1. In a rotatable fluid containing drum having a tapped orifice in one end adjacent the edge thereof, a tap comprising a passaged fitting externally threaded to screw into the orifice, the outer end of the fitting being internally threaded to alternately and selectively receive a screw plug and the threaded intake end of a spigot, and a passage member rigid with the fitting and projecting into the drum when the fitting is mounted in the orifice and having an open inner end then disposed in facing relation to the side wall of the drum nearest said edge in closely spaced relation to said wall whereby to allow of the initial removal of the plug from and mounting of the spigot in the fitting without spillage of the contents of the drum when filled and when the drum is turned so as to face said open end of the passage member upwardly, while allowing of the withdrawal of such contents through the spigot when the drum is rotated to dispose said open end downwardly.

2. A tap as in claim 1, in which the internal and external threads of the fitting are the same size.

CLARENCE W. PAULSEN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,248,720	Rosenfeld	Dec. 4, 1917
1,997,942	Metzgar	Apr. 16, 1935
2,038,676	Readeker	Apr. 28, 1936
2,171,302	Conner	Aug. 29, 1939